

REMARKS

Favorable reconsideration of this application is requested in view of the following remarks. The undersigned would like to confirm, with traverse, the election of claims 1-19 of Group I for further consideration in the present application. Claims 20-31 have been withdrawn from consideration. Therefore, claims 1-19 are now currently pending. Claim 5 has been amended for editorial purposes only, no new matter has been added.

The Examiner rejected claim 12 under 35 U.S.C. § 103(a) as being unpatentable over Megonnell et al. (U.S. Patent No. 6,214,212) in view of Higgins et al. (U.S. Patent No. 5,078,889). Claim 12 is directed to a method for treating water including providing at least one treatment tank having a water treatment compartment containing a water treatment material including carbon. Source water to be treated is communicated to the tank and water is passed through the treatment tank in order to remove a substance from the water. A determination is made as to when the tank requires regeneration. If it is determined that the tank requires regeneration, the communication of the source water to the tank is terminated and regeneration is effected in the tank. Regeneration includes passing an oxidant solution through the treatment tank where the oxidant is drawn from a reservoir.

The Examiner contends that Megonnell discloses a method for treating water with a water treatment material including carbon in a treatment tank. However, there is no disclosure of the regeneration step. Further, the Examiner states that Higgins discloses removing hydrogen sulfide from water with an adsorbent, and subsequently regenerating the adsorbent with an oxidizing agent such as sodium hypochlorite or peroxide.

It is respectfully submitted that one of ordinary skill in the art would not be led to combine the Megonnell reference with the Higgins reference to obtain the method of the present claim 12. Although Higgins discloses regenerating a media with reagents including chlorine and peroxide, it does not disclose regenerating a water treatment tank including a water treatment material including carbon. The media of Higgins is electrolytic magnesium dioxide (EMD) which is developed through a very specific process. As such, one would not look to Higgins to cure the deficiency of Megonnell, i.e., regeneration of the carbonaceous char. Further, Higgins teaches away from the use of

carbon adsorbents in water treatment. Column 2, lines 11-20 of Higgins states that carbon adsorbents lack usefulness for removing most heavy metals and are usually used in combination with other treatment methods. Further, in column 13, lines 9-28 states that one of the problems with carbon is the growth of bacteria in the filtration media. One of skill in the art viewing this patent would be led to use the EMD media and not a carbon media. Moreover, one would not look to Higgins for a process of regenerating carbonaceous char to combine with the process disclosed in Megonnell. It is respectfully submitted that claim 12 is not obvious and withdrawal of the rejection is requested.

Claim 13 depends from claim 12. As such, the dependent claim is patentable over the cited references for the same reasons as stated for claim 12 in view of its additional features. It is respectfully requested that the rejection of the claim be withdrawn.

The Examiner rejected claims 1-5, 7-11 and 15-19 under 35 U.S.C. § 103(a) as being unpatentable over Megonnell and Higgins and further in view of Prior (U.S. Patent No. 3,891,552). Claim 1 of the present invention recites a method for treating water by providing at least two treatment tanks, each tank having a water treatment compartment containing water treatment material including carbon. A source of water to be treated is communicated with at least one of the treatment tanks. Water is then passed through at least one treatment tank. It is then determined when the tanks require regeneration. Upon such determination, the communication of source water with the tank is terminated. Regeneration is then effected and includes passing an oxidant solution through the tank requiring regeneration, the oxidant being drawn from a reservoir.

The Examiner states that Prior discloses a multi-tank water treatment system and controlling the flow of source water and regeneration fluid in the recited manner. For the same reasons set forth above, one of ordinary skill in the art would not be led to combine the Higgins reference with the Megonnell reference to obtain the method of the present claim 1. As stated, the Higgins reference discloses a regeneration of EMD media. However, Higgins does not disclose a method of regenerating carbon through such regeneration means. Therefore, regardless if Megonnell, Higgins and Prior are combined, the combination does not teach or suggest to one of ordinary skill in the art how to regenerate a treatment tank including a water treatment material including carbon

with an oxidant solution. As such, withdrawal of the rejection of claim 1 is respectfully requested.

Claims 2-11 depend from claim 1. As such, these dependent claims are patentable over the cited references for the same reasons as stated for claim 1 in view of their additional features. It is respectfully requested that the rejection of these claims be withdrawn.

Claims 6 and 14 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Megonnell, Higgins and Prior and further in view of Roberts (U.S. Patent No. 2,855,364). Claim 6 depends from claim 3 and includes a further step of passing water through the treatment tank in a counterflow direction for a predetermined time, prior to initiation of the regeneration in order to fluff the catalytic carbon before regeneration. For reasons set forth above with regard to claims 1 and claim 12, one of ordinary skill in the art would not combine the teachings of Higgins, Megonnell and Prior with the teachings of Roberts to obtain the present claim 6. As such, claim 6 is patentable over the cited references. It is respectfully requested that the rejection of the claim be withdrawn.

Claim 14 is directed to a method for treating water by first providing at least two treatment tanks, each tank having a water treatment compartment containing water treatment material including a carbon bed. Communicating a source of water to be treated with at least one of the treatment tanks, while isolating the other treatment tank from the source of water to be treated. Water is then passed through at least one treatment tank in a first direction until it is determined that the one treatment tank requires regeneration. Upon determining that the one tank requires regeneration, communication of the source of water is terminated with the one tank and communicating the source of water to be treated with the other tank. Regeneration of the one tank is effected by first passing water through the one treatment tank in a counterflow direction for a predetermined time in order to fluff said carbon bed. An oxidant solution is then conveyed from a reservoir to the one tank and is passed through the carbon bed in a counterflow direction for a predetermined time followed by terminating the flow of oxidant solution and rinsing the one treatment tank by passing water through the carbon

bed in a counterflow direction until the oxidant solution is flushed from the carbon bed. Finally, water is passed through the carbon bed in the first flow direction for a predetermined time sufficient to compact the bed.

For reasons set forth above with regard to claims 1 and claim 12, one of ordinary skill in the art would not combine the teachings of Higgins, Megonell and Prior with the teachings of Roberts to obtain present claim 14. As such, claim 14 is patentable over the cited references and withdrawal of the rejection is respectfully requested.

Claim 15 recites a method of removing a substance containing sulfur, from water by providing at least two treatment tanks, each tank containing a water treatment material including carbon. Further providing a controller for controlling the communication of source water to be treated with the tanks, the controller controlling when a treatment tank is on-line and when a treatment tank is off-line. A reservoir of oxidant solution is provided and a mechanism to control a regeneration of an off-line tank. One of the tanks is placed online during regeneration of the other tank. Water is passed through the one treatment tank. Water usage is monitored and one tank is placed off-line when it is determined that the one tank requires regeneration. The tank is regenerated by drawing the oxidant solution from the reservoir and passing it through the one tank. For reasons set forth above with regard to claims 1 and claim 12, one of ordinary skill in the art would not combine the teachings of Higgins with Megonell to obtain present claim 15. As such, claim 15 is patentable over the cited references and withdrawal of the rejection is respectfully requested.

Claims 16-18 depend from claim 15. As such, these dependent claims are patentable over the cited references for the same reasons as stated for claim 15 in view of their additional features. It is respectfully requested that the rejection of these claims be withdrawn.

Claim 19 is directed to a method for removing a substance containing sulfur, from water by providing a treatment tank containing a treatment bed that includes carbon. Further providing a controller for controlling the communication of source water to be treated with the tank and for controlling the regeneration of the tank when regeneration is needed. Water to be treated is then passed through the treatment tank in order to remove

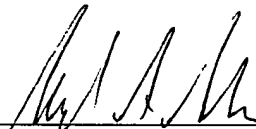
the substance. Water usage is monitored to determine when the tank requires regeneration. A reservoir of oxidant solution is provided. The communication of source water is terminated with the tank when it is determined that regeneration of the tank is required. The tank is regenerated by drawing oxidant solution from the reservoir and passing it through the tank. The tank is then rinsed with water to flush the oxidant solution from the tank.

For reasons set forth above with regard to claims 1 and claim 12, one of ordinary skill in the art would not combine the teachings of Higgins with Megonell to obtain present claim 19. As such, claim 19 is patentable over the cited references and withdrawal of the rejection is respectfully requested.

In view of the foregoing remarks, claims 1-19 are now in condition for allowance. A favorable response to this Amendment in the form of a Notice of Allowance is hereby solicited.

Respectfully submitted,

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